(St. John) Church was a transfer based upon Glyceria Fernaldii (Hitche.) St. John, Rhodora xix. 76 (1917); ultimately based upon Glyceria pallida var. Fernaldii Hitche., Rhodora viii. 211 (1906). The synonyms and the indication of the basonym were correct as stated by Church. However, it is clear that the original author of the name Fernaldii was Hitchcock in 1906. No impediment existed to the transfer of this varietal name. Hence, the binomial, with corrected authorities, should read: Torreyochloa Fernaldii (Hitche.) Church.—Harold St. John, University of Hawaii, Honolulu 14, T. H.

STUDIES OF MINNESOTA FLOWERING PLANTS WITH NOTES ON ADDITIONS TO THE FLORA¹

JOHN W. MOORE

During the past few years data have been accumulated on some minor variations of Minnesota plants. Names are here being proposed for these varients. Collecting in Minnesota has made possible the addition of several plants which do not seem to have been recorded as growing in Minnesota.

Plant collections are referred to by number and unless otherwise stated were gathered by the author in various parts of the state.

Echinochloa Walteri (Pursh) Nash forma laevigata Wieg. This form was collected one mile east of Caledonia, Houston County, No. 15960, Aug. 22, 1943.

Eleocharis ovata (Roth) R. & S. var. aphanactis varietas nova. Speciei similis sed achenia non setosa sunt. The nutlets are without bristles. This interior variety seems to be confined in Minnesota to the shores and islands of Lake of the Woods

and the Rainy Lake drainage.

Collections have been made as follows: growing along the north shore of Magnuson Island, Lake of the Woods County, John W. and Marjorie F. Moore, No. 11294 (TYPE), July 29, 1939; growing on sandy shore at the mouth of the Rapid River, Clementson, Lake of the Woods County, John W. and Marjorie F. Moore, No. 12010, Aug. 22, 1939; and growing on sandy shore along the Rainy River at Clementson, Lake of the Woods County, John W. and Marjorie F. Moore, No. 12102, Aug. 24, 1939.

¹ Contributions from the Herbarium of the University of Minnesota XV. Field work was supported in part by grants in aid of research from the Graduate School of the University of Minnesota.

Carex filifolia Nutt. was first collected in Minnesota by Professor O. A. Stevens of Fargo, North Dakota (gravelly knoll of prairie, Muskoda (Clay Co.) May 18, 1938, O. A. Stevens No. 321). Subsequent collections in Minnesota have been made in three other counties: prairie knoll, 4½ miles north of Marietta, Lac qui Parle County, No. 13162, June 21, 1940; Inspiration Peak, Ottertail County, J. W. Moore and B. O. Phinney, No. 12709, May 25, 1940; and Prairie 2½ miles south of the Gary Road, Yellow Medicine County, No. 13154, June 21, 1940.

It is to be expected at other localities on high gravelly knolls in the north western part of the state.

Carex Laxiflora Lam. This broad-leaved species with distant perigynia in the spike was collected on a hillside, 2 miles up the Root River from Peterson, Fillmore County, No. 15996, Aug. 24, 1943.

There have been many reports of Carex laxiflora from Minnesota, beginning with Upham's report in 1884. The plants so named have been Carex blanda of Dewey, an abundant sedge in Minnesota.

Carex obtusata Leljebl. was first collected in Minnesota by O. A. Stevens near Muskoda, Clay County. A collection of this boreal species was made on prairie, 1½ miles east of Karlstad, on Highway 11, Kittson County, by J. W. Moore and E. P. Thatcher, No. 14445, June 14, 1941. Professor Stevens made an additional collection on sandy prairie near Muskoda, No. 1052, on June 17, 1948.

Tradescantia bracteata Small forma albiflora forma nova. Corollis albis. The albino form of the species was growing in a prairie strip along the railroad right-of-way 6 miles east of Courtland, Nicollet County, No. 13031, June 19, 1940.

The plants were growing with the typical purple flowered form and with a roseate series which is being given the name

Tradescantia bracteata Small forma **rosea** forma nova. Speciei similis sed corollis roseis. The type collection is No. 13041, June 19, 1940.

Polygonatum canaliculatum (Muhl.) Pursh var. **rotundifolium** varitas nova. Foliis late ellipticis vel subrotundatis et obtusis, pro medio 10–12 cm. longis, 6–8 cm. latis; floribus late campanulatis, 15–18 mm. longis, 7–10 mm. latis. With leaves broadly elliptical or nearly orbicular, obtuse, the longest median leaves 10–12 cm. long, 6–8 cm. wide; flowers broadly campanulate, 15–18 mm. long, 7–10 mm. wide.

This variety was collected from a ravine of the Minnesota River bluffs, 1 mile south of the Mendota Bridge, Dakota County,

by J. W. and M. F. Moore, No. 12955, June 12, 1940.

Polygonatum canaliculatum (Muhl.) Pursh forma **foliatum** (H. M. Clarke) status nov. *Polygonatum commutatum* (Schultes f.) A. Dietrich forma *foliatum* Herbert M. Clarke, Am. Midland Nat. **39**: 762, fig. 1, 1948.

This interesting bracteate form of *Polygonatum canaliculatum* was collected in June 1895 by Max Menzel at Pipestone, Minnesota. A note on the sheet states "with curiously developed bracts." This seems to represent a bracted state comparable with *Polygonatum biflorum* (Walt.) Ell. forma *ramosum* (McGivney) Fernald.¹

Sisyrinchium campestre Bicknell forma **albiflorum** forma nova. Speciei simile sed corollis albis. The albino form was growing in prairie west of the railroad tracks along Highway 63, ½ mile south of Racine, Section 35, Racine Township, Mower County, J. W. Moore and E. P. Thatcher, No. 13847, May 10, 1941.

Quercus ellipsoidalis E. J. Hill var. kaposianensis varitas nova. A Quercus ellipsoidalis differt quod involucre fructiferum nuces includit et maturitate fere ¾ longitudinis eas tegit. The variety differs from the species in having the cups tightly enclosing the acorns and covering them for about ¾ their length at maturity. The variety grew in Kaposia Park, South St. Paul, and specimens were collected, No. 15216, on October 10, 1941. The fruits are ellipsoidal with an acute apex and, as in Q. ellipsoidalis proper, are marked with dark longitudinal stripes.

Stellaria longifolia Muhl. ex Willd. Enum. Hort. Berl. 479, 1809. This is the plant with greenish or greenish yellow capsules.

Stellaria longifolia Muhl. var. **subaequalis** varitas nova. A varietate typica differt quod capsulae calycibus aequales sunt vel paulo superant, semina oblonga sunt. It differs from the typical variety in having the pods equaling or but little longer than the sepals; the seeds are oblong. Plants were abundant and growing in swampy ground, east side of Tilson Bay, Rainy Lake, Koochiching County, John W. and Marjorie F. Moore, No. 11846, Aug. 17, 1939.

Stellaria longifolia Muhl. var. atrata varitas nova. Varietati typicae similis nisi quod capsulae lucidae atro fuscae sunt; sepala exteriora ciliolata sunt. It is similar to the typical variety but with the capsules lustrous brownish black and the

¹ RHODERA, 46: 12, 1944.

exterior sepals ciliolate. This localized varient was obtained in mature fruit in July and is the second of two varieties of Lake of the Woods region. The plants were growing in a white cedar bog, in sphagnum, east side of Pine Creek, Angle Inlet, John W. and Marjorie F. Moore, No. 11135, July 25, 1939.

Stellaria uliginosa Murr. was listed by Upham in his Catalogue of the Flora of Minnesota, page 181, 1884, from "Fond du Lac, at west end of Lake Superior, Miss Herrick, North." In 1895 J. M. Holzinger of the Winona Normal School collected the species at Lamoille Cave, Winona County, Minnesota, June 20. The plant has a label bearing the name Alsine longifolia. It is in good flower and fruit and belongs here. On September 18, 1936, Dr. C. O. Rosendahl collected a Stellaria at his home, which proved to be this species. The plants were growing in shady places in lawn (under walnut tree and along fence covered with grape vine). The label with the plants notes "never noticed in flower at this place, St. Anthony Park, St. Paul, Minnesota."

ANEMONE QUINQUEFOLIA L. var. INTERIOR Fernald forma rubra forma nova. Varietati similis sed floribus rubro-tinctis. This form is differentiated by its reddish tinted flowers. The TYPE, No. 12775, was collected in woods, SE½, Section 8, Effington Township, Ottertail County, by J. W. Moore and B. O. Phinney, May 26, 1940.

Neslia paniculata (L.) Desv. Specimens of this European weed were collected on a prairie strip along the railroad, ¼ mile east of Gibbon, Sibley County, No. 13234, June 22, 1940. An additional collection was made by John B. Moyle, No. 3952, in Chippewa County, near Watson, where it was noted as infrequent along the road, July 23, 1945.

Spiraea Alba DuRoi forma **rosea** forma **nova**. A Spiraea alba differt corollis roseis. The form with pink petals was collected along the roadside 1½ miles south of Runeberg, Becker County, by J. W. Moore and D. L. Jacobs, No. 14854,

June 8, 1941.

Rubus idaeus L. var. strigosus (Michx.) Maxim. forma niveus forma nova. A varietate strigosus differt foliis subter niveo-tomentosis, foliolis primocanorum late ovatis, caulibus cinereis. It differs from variety strigosus in having the leaves snowy white-tomentose on the lower surface, the leaflets of the primocanes broadly ovate, and the stems cinereous. The new form was found growing on a low hill, east side of Tilson Bay, Township 71, Range 23W, Rainy Lake, Koochiching County, John W. amd Marjorie F. Moore, No. 11751, Aug. 14, 1939.

Rosa Eglanteria L. escaped from cultivation and was growing along the west shore of Chub Lake, Dakota County, No. 15875, June 30, 1943.

Oxalis violacea L. forma alba Fassett (Trans. Wisc. Acad. of Sci., 22: 174, 1933). The white or albino form was collected on an original prairie strip along a railroad right-of-way, 1 mile east of Westport, on Highway 28, Pope County, by J. W. Moore

and B. O. Phinney, No. 12665, May 25, 1940.

Impatiens capensis Meerb. forma Peasei (A. H. Moore.) Fern. & Schub. The roseate form of the species was found growing in balsam forest in association with white spruce, green ash, beaked hazel, and *Acer spicatum* at Pelland, Koochiching County, *John W. and Marjorie F. Moore*, No. 11933, Aug. 19, 1939.

In these plants the lip of the corolla in addition to being spotted was tinged with light red.

Cornus racemosa Lam. forma Nielseni forma nova. Speciei similis sed foliis colore helvo variegatis. The specimen differs from the typical species in having the leaves variegated with yellow. This striking form was collected by Etlar Nielsen in a maple-elm forest northwest of Long Lake, Detroit Lakes, July 5, 1933, No. 2116, and was said to have been taken from a shrub 6 feet tall at the time the collection was made.

PLOX DIVARICATA L. var. LAPHAMII Wood forma **bicolor** forma nova. Corollae est limbus caeruleus et albus et striatus. The corolla-limb is blue and white striped, making an outstanding varient which was collected at the mouth of the Root River in woods by the road, Houston County, by J. W. Moore and Bernard O. Phinney, No. 14278, on May 2, 1942.

The blue and white striped corolla limb is quite in contrast with the pale blue corollas of the variety in this region.

Prunella vulgaris L. var. **parviflora** (Gilib.) combinatio nova. *Prunella parviflora* Gilib. Fl. Lithuan. II, 88, 1781 and Exerc. Phytol. 1: 99, 1792.

This plant has appeared in lawns in the eastern United States. It is now established in Minnesota. Specimens from the lawn of Lloyd M. Short of Minneapolis (65 Clarence Avenue S. E., Minneapolis, Hennepin County, June 8, 1943) were presented to the Herbarium of the University of Minnesota for determination in 1943.

Physostegia formosion Lunell forma alba forma nova. Corollis albis. The white flowered form was found growing in

wet ground 1/4 mile northwest of Warroad, Roseau County,

John W. and Marjorie F. Moore, No. 11399, Aug. 2, 1939.

Galeopsis Tetrahit L. var. bifida (Boenn.) Lej. and Court. was first collected by C. O. Rosendahl in moist soil near a spring below Spring Grove parsonage, Houston County, Aug. 11, 1928. A second station for this small flowered variety was found by the writer and a collection made in a creek bottom, 1 mile east of Austin, Mower County, No. 14902, Aug. 2, 1941.

LINARIA MINOR (L.) Desf. (Chaenorrhinum minus (L.) Lange), an interesting annual, was first found in Minnesota in 1940. It was growing as a weed on a railroad right-of-way, southeast ¼, section 1, Mankato Township, Blue Earth County, No. 13025, June 19, 1940. Miss Olga Lakela has since found the plant growing along railroad tracks, in gravel at New Duluth, on Sept.

9, 1945.

pallens forma nova. A varietate differt ligulis subcaeruleis. Plants of this form were found growing in peat soil near the international boundary line north of Longworth at an elevation of 1072 feet, Roseau County, John W. and Marjorie F. Moore, No. 11381, Aug. 2, 1939. The rays had a faint blue tint rather

than dark purple as in the northeastern states.

ASTER INTERIOR Wiegand has been collected twice from Minnesota: growing on rocky shore at mouth of Rapid River, Clementson, Lake of the Woods County, John W. amd Marjorie F. Moore, No. 12001, Aug. 22, 1939; and plants growing in opening in poplar woods, 0.8 of a mile west of the Big Fork River, Reedy Township, Koochiching County, John W. and Marjorie F. Moore, No. 12060, Aug. 23, 1939.

ERIGERON PULCHELLUS Michx. forma **Tolsteadii** (Cronquist) status nov. Erigeron pulchellus Michx. var. Tolsteadii Cronquist, Brittonia, 6: 248, 1947. The type specimen of the albino form is No. 34 of W. L. Tolstead, collected near Lake City,

Goodhue County, Minnesota, June 15, 1937.

ANTENNARIA APRICA Greene, a western species, was reported for Minnesota in 1932 by Rydberg in his Flora of the Prairies and Plains of Central North America. The several collections deposited in the University of Minnesota Herbarium indicate that Antennaria aprica is a common species in North Dakota. A collection was made in Minnesota from sandy hills about 1½ miles south-west of Fertile, Polk County, by J. W. Moore and E. P. Thatcher, No. 14361, June 14, 1941.

Antennaria aureola Lunell, Am. Midland Nat., 2: 288, 1912.

While examining related species, a study was made of Antennaria aureola Lunell. This plant differs from Antennaria aprica only in the relatively narrow outer involucral bracts that are rounded obtuse or subacute. In pubescence of the leaves and other fundamentals of leaf size and shape, flowering stem bracts, and flower structure the affinity seems too close to retain the entity as a species. Antennaria aureola is considered a variety of Antennaria aprica.

Antennaria microphylla Rydb. (Antennaria Solstitialis Lunell). No. 14482 was found growing in a low meadow, South East ¼, Section 36, Excet Township, Marshall County, by John W. Moore and E. P. Thatcher, June 15, 1941. Dr. J. Lunell described staminate plants of this species as Antennaria Solstitialis Lunell.

Xanthium oviforme Wallr. There are two collections of this species from Minnesota: one from plants growing on sandy beach of Rocky Point, Lake of the Woods, Lake of the Woods County, John W. and Marjorie F. Moore, No. 12156, Aug. 27, 1939; the other from plants growing on shore, south side of American Point, Lake of the Woods County, John W. and Marjorie F. Moore, No. 11327, July 31, 1939.

Helianthus Nuttallii T. & G., typically a plant of the more arid western and southwestern United States, enters the northern border region of Minnesota. Plants were found growing in sandy ground ¼ mile northwest of Warroad, Roseau County, by John W. and Marjorie F. Moore, No. 11402, Aug. 2, 1939.

ACHILLEA MULTIFLORA Hook. until now has been known from as far east as the Turtle Mountains, Rolette County, North Dakota, where it was collected by Dr. J. Lunell in 1910 and 1912. In Minnesota it was found growing in peat soil 1.3 miles north of Longworth, Roseau County, John W. and Marjorie F. Moore, No. 11361, Aug. 2, 1939.

This is the easternmost known station in the United States.

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